REMARKS

I. Introduction

In response to the Office Action dated October 19, 2004, the claims have not been amended. Claims 1-21 remain in the application. Re-examination and re-consideration of the application is requested.

II. Prior Art Rejections

In paragraphs (4)-(5) of the Office Action, claims 1-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Andersson, U.S. Patent No. 6,046,749 (Andersson).

Specifically, the independent claims were rejected as follows:

> **Claim 1**, Anderson discloses modifications to a geometric object in a computer drawing program (AutoCAD application software; col. 1, lines 7-26; col. 2, lines 45-65; col. 3, lines 36-38), comprising: accepting, from a user, placement of a user-selected 3D geometric object (click operation and shift operation) in a computer drawing program (see abstract and col. 4, lines 15-40; fig. 1); simultaneously displaying a first oriented 3D grip glyph directly on the 3D geometric object (the first arrow in fig. 1) and a second oriented 3D grip glyph directly on the 3D geometric object (the second arrow in fig. 1 by shifting 3D object and then displayed on the computer screen; see abstract and col. 1, lines 44-62; col. 5, lines 32-65; fig. 1), wherein the first oriented 3D grip glyph and second oriented 3D grip glyph provide a direct visual indications of valid movement directions (the direct modification of an object in the 3D view with help of an input device: click and shifting movement) during direct manipulating 3D object using the grip glyphs (col. 4, lines 41-67; figs. 2 and 3).
>
> **Claims 8-14**, the rationale provided in the rejection of claims 1-7 is incorporated herein. In addition, Chen teaches a computer system having a memory and a data storage device (a database; col. 3, lines 41-42; a program storage medium; col. 9, lines 14-18); a drawing program (the AutoCAD graphics application software or similar software programs; col. 3, lines 38-40).
>
> **Claims 15-21**, the rationale provided in the rejection of claims 1-7 is incorporated herein. In addition, Anderson teaches an article of manufacture comprising a program storage medium readable by a computer to perform a method (col. 9, lines 14-19).

Applicant traverses the above rejections. In this regard, Andersson does not teach, disclose or suggest a 3D grip glyph that is both (a) displayed directly on a 3D geometric object, and (b) provides direct visual indications of valid movement using the grip glyph. In addition, Andersson fails to teach, disclose, or suggest the display of the 3D grip glyph directly on a 3D object that has been user selected and user placed.

Independent claims 1, 8, and 15 are generally directed to an invention that provides a method for indicating available modifications to a graphical object displayed in computer drawing program. More specifically, users often select and place 3D objects in a drawing program (see

paragraph [0003]). After placement, the user often manipulates the graphical object that the user just placed. The claims provide the ability to display 3D grip glyphs directly on the recently selected/placed graphical object. Such a 3D grip glyph is displayed directly on a 3D object that has been user selected and user placed. The grip glyphs indicate the valid movements for the user-selected graphical object. Also note that the term "grip glyphs" have a particular meaning. In this regard, the grip glyph may be "gripped" by the user to manipulate the 3D geometric object. In this regard, the claims specifically provide that the 3D geometric object is directly manipulated using the grip glyphs.

The cited references do not teach nor suggest these various elements of Applicant's independent claims.

Andersson merely describes a method for the modification of three-dimensional objects via an input device allowing only two-dimensional input. The method comprises creating a three-dimensional object and displaying a three-dimensional representation of the object. The method further comprises activating the three-dimensional object and displaying a representation of a three-dimensional coordinate system. One of the axes of the three-dimensional coordinate system assigned to the object is selected, and the origin of the assigned coordinate system is shifted within a global three-dimensional coordinate system along a line defined by the orientation of the selected axis of the assigned coordinate system. The three-dimensional object is then computed relative to the global coordinate system after shifting according to the displacement of the origin of the assigned coordinate system. A representation of the shifted three-dimensional object is then displayed on the computer screen.

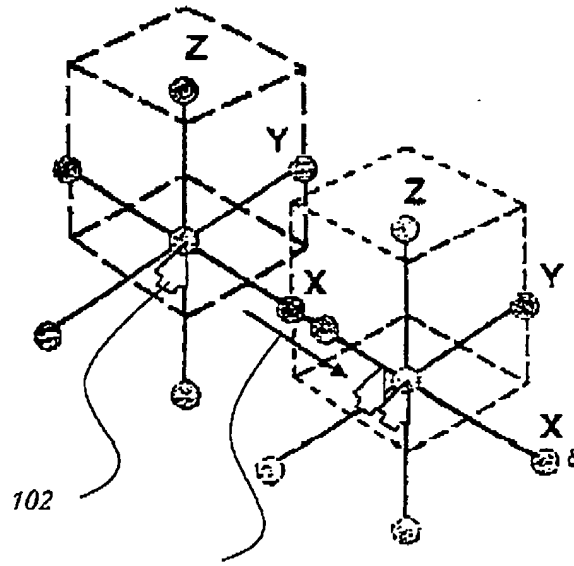
Applicant first notes that the claims provide for accepting, from a user, placement of a user-selected 3D geometric object. Applicant also notes that the grip glyphs are displayed directly on the user selected and placed object. In rejecting the placement aspect of the claims, the Office Action relies on Andersson's click and shift operation. However, unlike the present invention, Andersson does not teach such a user selected and placed 3D object. Instead, a coordinate system is merely assigned to an object displayed on the screen (see col. 3, lines 66-67). Andersson explicitly provides that the object in FIG. 1 is identified by the dashed outlines (see col. 4, lines 15-18). In this regard, the dashed outlines depict a cube object. As can be clearly seen in Andersson's FIG. 1, the modification points are not displayed directly on the object itself. Instead, the modification points

are displayed on the coordinate system that is displayed over the object. Accordingly, rather than displaying a modification point or a grip glyph directly on a 3D object that has been selected by a user and placed by a user, Andersson merely displays a modification point on a coordinate system that is placed over an object and that has not been selected by the user.

In response to the above, the Patent Office may attempt to assert that the coordinate system and not the dashed cubic structure is the 3D object that reads on the present claims. Applicant respectfully disagrees. Firstly, the coordinate system is not a user selected 3D object. Instead, as set forth in Andersson, after the object has been activated by means of a mouse click, a representation of the coordinate system assigned to the object is displayed (see col. 3, lines 48-53). Thus, Andersson's coordinate system is not selected by the user. Instead, Andersson's object is selected and the coordinate system assigned to that object is automatically displayed.

The present claims continue and provide that the 3D grip glyph is displayed directly on the 3D object. Based on the rejection, Applicant assumes that the Office Action is relying on the coordinate system matching up to the claimed 3D object (which Applicant traverses as stated above). The Office Action then provides that the first arrow in Fig. 1 is equivalent to the claimed grip glyph. Applicant respectfully disagrees. There are various arrows displayed in FIGS. 1, 2, and 3 of Andersson. However, none of the displayed arrows are grip glyphs. In other words, none of the displayed arrows may be gripped by the user to directly manipulate the object as claimed. As set forth below, there are two different types of arrows in the figures (as indicated by Applicant's labels): (1) hollow arrows 102, and (2) solid arrow 103.

Fig. 1



Since there is only one solid arrow 103 in Fig. 1, Applicants assume that the Office Action is referring to the hollow arrows 102 in rejecting the grip glyphs of the invention (since the Office Action recites the first arrow in fig. 1 and the second arrow in fig. 1). Applicants note that hollow arrows 102 are not glyphs whatsoever. Instead, hollow arrows 102 are merely depictions of the cursor (for the benefit of reader of the patent application). As can be seen in Fig. 1, the cursor is placed over a desired modification point (i.e., the circles on the coordinate axis) by the user and the desired modification point is selected (see col. 4, lines 15-21). However, the hollow arrow 102 does not provide any indication of valid movement direction. Instead, the arrows merely point diagonally up. The diagonal direction does not indicate valid movement direction for manipulating the object. Further, the modification points also fail to provide any indication of the valid movement direction.

The Office Action asserts that the claimed direct visual indication of valid movement direction is equivalent to "the direct modification of an object in the 3D view with help of an input device: click and shifting movement". Applicant respectfully disagrees with and traverses such an assertion. Regardless of whether the modification points can be directly modified with the help of an input device, all of the modification points are identical and completely fail to provide any indication of valid movement direction. In this regard, all of the modification points in Fig. 1-3 are identical on the coordinate axis (i.e., they are all merely circles). Such circles completely fail to provide any indication of valid movement direction. In addition, the cursor arrows 102 are also all identical and fail to provide any indication of valid movement direction. Applicant also notes that cursor arrows 102 are not selectable by the user but merely reflect where the user's cursor is currently located on the screen. Accordingly, such cursors 102 cannot be gripped and are not "grip glyphs" as claimed.

The only indication of movement direction displayed in Figs. 1-3 of Andersson is that of solid arrows 103. However, Applicant notes that such arrows 103 are not selectable (i.e., they are not grippable and are not grip glyphs), and cannot be used to directly manipulate either the object or the coordinate system. Further, such arrows 103 are not displayed directly on either the object or the coordinate system. Instead, as indicated in Fig. 1, the arrows is displayed adjacent to the coordinate system. Further, the arrow 103 is not displayed directly on the cubic structure.

In view of the above, none of the arrows or elements set forth in Figs. 1-3 even remotely depict various aspects of the claimed invention. Instead, they are clearly differentiable from the present invention. Further, they cannot and do not render the present invention obvious.

Moreover, the various elements of Applicant's claimed invention together provide operational advantages over Andersson. For example, the present invention allows the user to merely see which grip glyph to select to manipulate an object without selecting the object first. However, the only way Andersson can determine how to manipulate an object is to first select the object, then to select a particular modification point and manipulate the modification point to see how it changes the object (e.g., through experimentation). In addition, Applicant's invention solves problems not recognized by Andersson. For example, Andersson completely fails to recognize the problem of being forced to determine from the position of the modification point what a resulting action will be and determining a valid direction constraint by experimentation (see page 2, line 21 – page 3, line 2 of the present specification). Instead, Andersson relies on such a forced determination and experimentation. In this regard, Andersson teaches away from the present invention.

Thus, Applicant submits that independent claims 1, 8, and 15 are allowable over Andersson. Further, dependent claims 2-7, 9-14, and 16-21 are submitted to be allowable over Andersson in the same manner, because they are dependent on independent claims 1, 8, and 15, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-7, 9-14, and 16-21 recite additional novel elements not shown by Andersson.

III. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

GATES & COOPER LLP
Attorneys for Applicant(s)

Howard Hughes Center
6701 Center Drive West, Suite 1050
Los Angeles, California 90045
(310) 641-8797

Date: January 17, 2005

By: Jason S. Feldmar
Name: Jason S. Feldmar
Reg. No.: 39,187

JSF/